



October 8, 2018

Reference No 003250

Mr. David Linneer  
United States Environmental Protection Agency  
Region V, Mail Code (SR-6J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604

Dear Mr. Linneer.

**Re: Progress Report No. 184: July through September 2018  
Remedial Design/Remedial Action  
Pristine, Inc. Site, Reading, Ohio**

Pursuant to Section XI of the Consent Decree for the United States of America vs American Greetings Corporation et al – Civil Action C-89-837, which became effective November 23, 1990, this report is submitted as the quarterly progress report for the months of July through September 2018

## **1. Activities Completed During the Reporting Period**

### **1.1 Site Activities**

- 1 Continued sampling activities related to the operation and maintenance of the groundwater treatment system.
- 2 On July 16, 2018, a hydraulic monitoring event at the Pristine monitoring wells was conducted
- 3 The annual groundwater sampling event (Round 50) was conducted between July 16 and August 8, 2018.
- 4 On July 20, 2018, the Pristine treatment plant was struck by lightning. The lightning strike damaged several motors, automatic valves, the site computer and instrumentation at the facility. The damaged equipment was subsequently replaced with new equipment. The treatment plant was off line for approximately five days while repairs were being completed following the lightning strike.
- 5 The cleaning of off-Site extraction well EW5 was conducted between August 13 and August 17, 2018. A breach in the well casing was discovered during the cleaning process.
- 6 On September 20, 2018, the Site backflow preventer was successfully tested. The results of the backflow preventer test were forwarded to the Hamilton County Health Department.
- 7 On September 25, 2018, Ron Ware of the Ohio EPA, Division of Surface Water, conducted an audit at the Pristine Site.
- 8 On September 25, 2018, the Pristine Facility Trust and GHD met with the City of Reading to review the Pristine Site Institutional Controls (ICs).



9. The total volume of treated water discharged to Mill Creek as of October 1, 2018 was approximately 1,807,898,291 gallons. The total volume of treated water discharged to Mill Creek during July through September 2018 was approximately 4,673,242 gallons (representing 96.1 percent online time for the groundwater treatment system)

## **1.2 Correspondence**

1. The Pristine Site quarterly progress report (Report #183) was sent to the U.S. EPA, the Ohio EPA and the Pristine Facility Trust on July 5, 2018
2. The Pristine Facility Trust sent an email to the U.S. EPA on July 11, 2018 informing the agency of the Pristine Trustees' intention to restart groundwater pumping at off-Site extraction well EW5
3. The semi-annual financial report for the Pristine Site was sent to the U.S. EPA on July 11, 2018
4. The monthly effluent monitoring report for the treatment facility for June 2018 was sent to the U.S. EPA, the Ohio EPA and the Pristine Facility Trust on July 23, 2018
5. The monthly effluent monitoring report for the treatment facility for July 2018 was sent to the U.S. EPA, the Ohio EPA, and the Pristine Facility Trust on August 15, 2018
6. On August 10, 2018, a letter was received from the U.S. EPA which responded to the Pristine Trustees' proposal to amend the MNA Pilot Program by restarting groundwater pumping at off-Site extraction well EW5
7. The monthly effluent monitoring report for the treatment facility for August 2018 was sent to the U.S. EPA, the Ohio EPA, and the Pristine Facility Trust on September 11, 2018
8. On September 26, 2018, the Pristine Trustees sent a letter to the U.S. EPA and the Ohio EPA which responded to the U.S. EPA's August 10, 2018 letter
9. On September 28, 2018, a letter was received from Ohio EPA which presented the findings from the Ohio EPA audit at the Pristine Site that was conducted on September 25, 2018. The letter did not identify any issues at the Site requiring corrective action



## **2. Activities Scheduled for Next Reporting Period**

- 1 Continue extraction/treatment system operations
- 2 Restart off-Site groundwater pumping
- 3 Complete a quarterly hydraulic monitoring event of lower aquifer monitoring wells.
- 4 Submit the Round 50 Groundwater Sampling Report

## **3. List of Attachments**

- |              |   |
|--------------|---|
| Attachment 1 | July 16, 2018 Water Levels and Summary of Average Extraction Well Pumping Rates |
| Attachment 2 | Summary of Treatment System Analytical Results.                                 |
| Attachment 3 | Summary of Operation and Maintenance Monitoring                                 |
| Attachment 4 | Summary of Groundwater and ISVE Treatment System Downtime                       |

Should you have any questions on the above, please do not hesitate to contact us

Sincerely,

GHD

A handwritten signature in black ink that reads "Henry Cooke".

Henry Cooke

A handwritten signature in black ink that reads "Ashley P. Valentine".

Ashley Valentine

HC/po/22  
Encl

cc Scott Glum (Ohio EPA)  
Ron Pitzer (Pristine Trust)  
Martha Farr (Pristine Trust)  
Peggy Dewan (Pristine Trust)  
Steve Haughey (Frost Brown Todd LLC)  
Mike Foster (Eli Lilly and Company)  
Julian Hayward (GHD)

# **Attachment 1**

## **Summary of Average Extraction Well Pumping Rates**

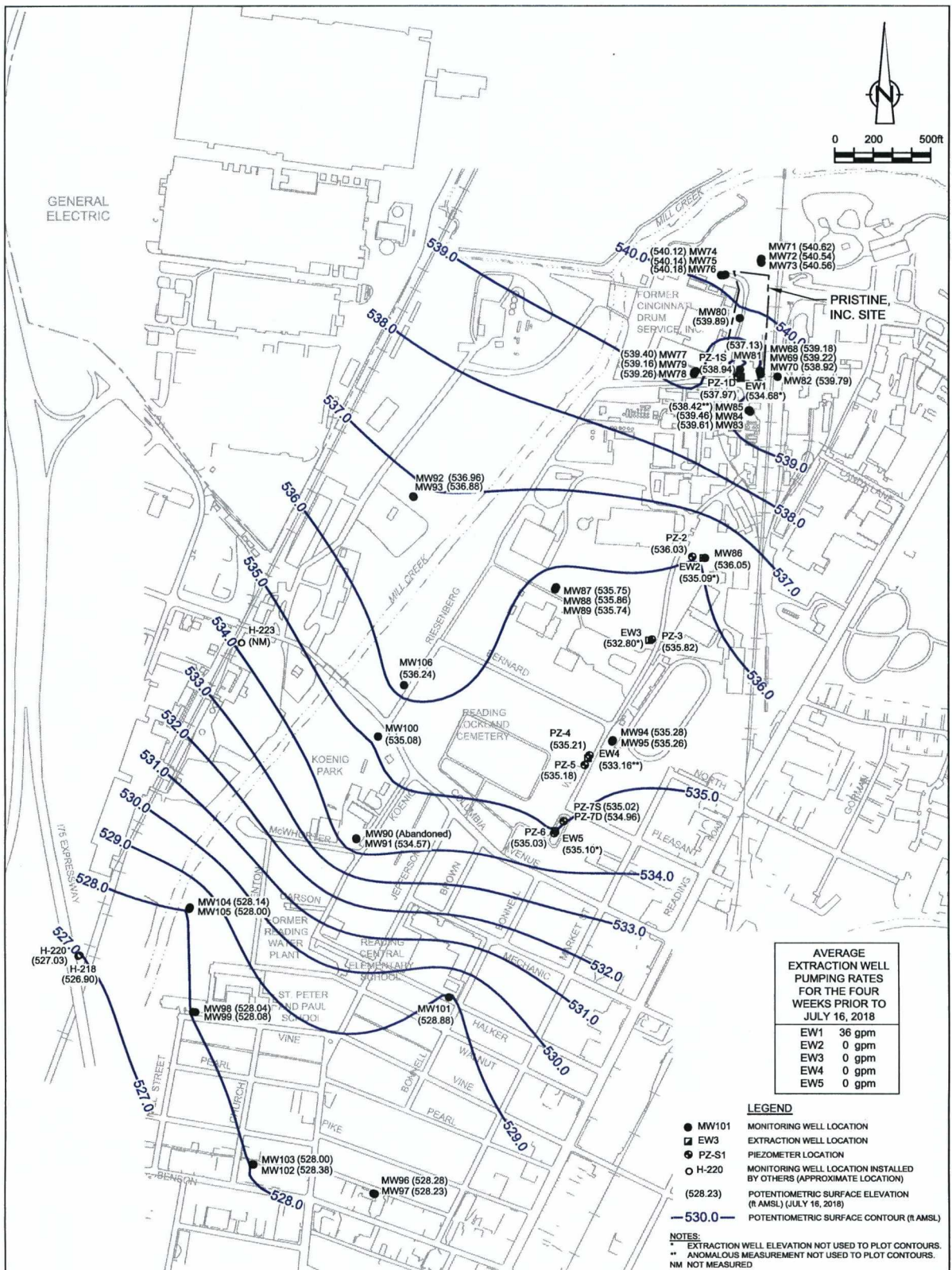


figure 1  
 POTENTIOMETRIC SURFACE CONTOUR MAP - LOWER AQUIFER  
 JULY 16, 2018  
 Pristine, Inc. Site



BASE SOURCE: CAGIS, 2007.

**EW-1**  
**WEEKLY AVERAGE PUMPING RATES**  
**Pristine, Inc. Site**  
**Reading, Ohio**

Page 1 of 10

<u>Date</u>	<u>Current Reading<sup>(1)</sup></u>	<u>Previous Reading</u>	<u>Difference</u>	<u>Average Pumping Rate (gpm)<sup>(c)</sup></u>
1/2/2009	86,411,000	86,035,000	376,000	37
1/9/2009	86,785,000	86,411,000	374,000	37
1/16/2009	87,163,000	86,785,000	378,000	38
1/23/2009	87,543,000	87,163,000	380,000	38
1/30/2009	87,924,000	87,543,000	381,000	38
2/6/2009	88,304,000	87,924,000	380,000	38
2/13/2009	88,700,000	88,304,000	396,000	39
2/20/2009	89,043,000	88,700,000	343,000	34
2/27/2009	89,415,000	89,043,000	372,000	37
3/6/2009	89,788,000	89,415,000	373,000	37
3/13/2009	90,131,000	89,788,000	343,000	34
3/20/2009	90,495,000	90,131,000	364,000	36
3/27/2009	90,871,000	90,495,000	376,000	37
4/3/2009	91,251,000	90,871,000	380,000	38
4/10/2009	91,627,000	91,251,000	376,000	37
4/17/2009	92,001,000	91,627,000	374,000	37
4/24/2009	92,191,000	92,001,000	190,000	19
5/1/2009	92,273,000	92,191,000	82,000	8
5/8/2009	92,476,000	92,273,000	203,000	20
5/15/2009	92,807,000	92,476,000	331,000	33
5/22/2009	93,183,000	92,807,000	376,000	37
5/29/2009	93,515,000	93,183,000	332,000	33
6/5/2009	93,886,000	93,515,000	371,000	37
6/12/2009	94,256,000	93,886,000	370,000	37
6/19/2009	94,630,000	94,256,000	374,000	37
6/26/2009	95,008,000	94,630,000	378,000	38
7/3/2009	95,386,000	95,008,000	378,000	38
7/10/2009	95,761,000	95,386,000	375,000	37
7/17/2009	96,141,000	95,761,000	380,000	38
7/24/2009	96,519,000	96,141,000	378,000	38
7/31/2009	96,897,000	96,519,000	378,000	38
8/7/2009	97,275,000	96,897,000	378,000	38
8/14/2009	97,631,000	97,275,000	356,000	35
8/21/2009	98,002,000	97,631,000	371,000	37
8/28/2009	98,384,000	98,002,000	382,000	38
9/4/2009	98,754,000	98,384,000	370,000	37
9/11/2009	99,133,000	98,754,000	379,000	38
9/18/2009	99,513,000	99,133,000	380,000	38
9/25/2009	99,891,000	99,513,000	378,000	38
10/2/2009	100,266,000	99,891,000	375,000	37
10/9/2009	100,646,000	100,266,000	380,000	38
10/16/2009	101,025,000	100,646,000	379,000	38
10/23/2009	101,407,000	101,025,000	382,000	38
10/30/2009	101,785,000	101,407,000	378,000	38
11/6/2009	102,147,000	101,785,000	362,000	36
11/13/2009	102,526,000	102,147,000	379,000	38
11/20/2009	102,902,000	102,526,000	376,000	37
11/27/2009	103,281,000	102,902,000	379,000	38
12/4/2009	103,662,000	103,281,000	381,000	38
12/11/2009	104,022,000	103,662,000	360,000	36
12/18/2009	104,377,000	104,022,000	355,000	35
12/25/2009	104,751,000	104,377,000	374,000	37

**EW-1**  
**WEEKLY AVERAGE PUMPING RATES**  
**Pristine, Inc Site**  
**Reading, Ohio**

Page 2 of 10

<u>Date</u>	<u>Current Reading<sup>(1)</sup></u>	<u>Previous Reading</u>	<u>Difference</u>	<u>Average Pumping Rate (gpm)<sup>(2)</sup></u>
1/1/2010	105,125,000	104,751,000	374,000	37
1/8/2010	105,486,000	105,125,000	361,000	36
1/15/2010	104,706,000	105,486,000	-780,000	-77
1/22/2010	105,094,000	104,706,000	388,000	38
1/29/2010	105,483,000	105,094,000	389,000	39
2/5/2010	105,863,000	105,483,000	380,000	38
2/12/2010	106,247,000	105,863,000	384,000	38
2/19/2010	106,634,000	106,247,000	387,000	38
2/26/2010	107,006,000	106,634,000	372,000	37
3/5/2010	107,386,000	107,006,000	380,000	38
3/12/2010	107,774,000	107,386,000	388,000	38
3/19/2010	108,160,000	107,774,000	386,000	38
3/26/2010	108,535,000	108,160,000	375,000	37
4/2/2010	108,837,000	108,535,000	302,000	30
4/9/2010	109,228,000	108,837,000	391,000	39
4/16/2010	109,617,000	109,228,000	389,000	39
4/23/2010	109,804,000	109,617,000	187,000	19
4/30/2010	109,807,000	109,804,000	3,000	0
5/7/2010	110,008,000	109,807,000	201,000	20
5/14/2010	110,388,000	110,008,000	380,000	38
5/21/2010	110,768,000	110,388,000	380,000	38
5/28/2010	111,121,000	110,768,000	353,000	35
6/4/2010	111,502,000	111,121,000	381,000	38
6/11/2010	111,882,000	111,502,000	380,000	38
6/18/2010	112,258,000	111,882,000	376,000	37
6/25/2010	112,613,000	112,258,000	355,000	35
7/2/2010	112,937,000	112,613,000	324,000	32
7/9/2010	113,317,000	112,937,000	380,000	38
7/16/2010	113,690,000	113,317,000	373,000	37
7/23/2010	114,070,000	113,690,000	380,000	38
7/30/2010	114,440,000	114,070,000	370,000	37
8/6/2010	114,819,000	114,440,000	379,000	38
8/13/2010	115,200,000	114,819,000	381,000	38
8/20/2010	115,585,000	115,200,000	385,000	38
8/27/2010	115,972,000	115,585,000	387,000	38
9/3/2010	116,357,000	115,972,000	385,000	38
9/10/2010	116,739,000	116,357,000	382,000	38
9/17/2010	117,113,000	116,739,000	374,000	37
9/24/2010	117,488,000	117,113,000	375,000	37
10/1/2010	117,878,000	117,488,000	390,000	39
10/8/2010	118,247,000	117,878,000	369,000	37
10/15/2010	118,612,000	118,247,000	365,000	36
10/22/2010	118,908,000	118,612,000	296,000	29
10/29/2010	119,281,000	118,908,000	373,000	37
11/5/2010	119,607,000	119,281,000	326,000	32
11/12/2010	119,947,000	119,607,000	340,000	34
11/19/2010	120,299,000	119,947,000	352,000	35
11/26/2010	120,663,000	120,299,000	364,000	36
12/3/2010	121,029,000	120,663,000	366,000	36
12/10/2010	121,428,000	121,029,000	399,000	40
12/17/2010	121,781,000	121,428,000	353,000	35
12/24/2010	122,163,000	121,781,000	382,000	38
12/31/2010	122,524,000	122,163,000	361,000	36

EW-1  
WEEKLY AVERAGE PUMPING RATES  
Pristine, Inc. Site  
Reading, Ohio

Page 3 of 10

<u>Date</u>	<u>Current Reading<sup>(1)</sup></u>	<u>Previous Reading</u>	<u>Difference</u>	<u>Average Pumping Rate (gpm)<sup>(2)</sup></u>
1/7/2011	122,884,000	122,524,000	360,000	36
1/14/2011	123,145,000	122,884,000	261,000	26
1/21/2011	123,534,000	123,145,000	389,000	39
1/28/2011	123,911,000	123,534,000	377,000	37
2/4/2011	124,279,000	123,911,000	368,000	37
2/11/2011	124,639,000	124,279,000	360,000	36
2/18/2011	124,995,000	124,639,000	356,000	35
2/25/2011	125,336,000	124,995,000	341,000	34
3/4/2011	125,687,000	125,336,000	351,000	35
3/11/2011	125,909,000	125,687,000	222,000	22
3/18/2011	126,274,000	125,909,000	365,000	36
3/25/2011	126,656,000	126,274,000	382,000	38
4/1/2011	127,043,000	126,656,000	387,000	38
4/8/2011	127,410,000	127,043,000	367,000	36
4/15/2011	127,792,000	127,410,000	382,000	38
4/22/2011	128,171,000	127,792,000	379,000	38
4/29/2011	128,527,000	128,171,000	356,000	35
5/6/2011	128,910,000	128,527,000	383,000	38
5/13/2011	129,285,000	128,910,000	375,000	37
5/20/2011	129,462,000	129,285,000	177,000	18
5/27/2011	129,467,000	129,462,000	5,000	0
6/3/2011	129,608,000	129,467,000	141,000	14
6/10/2011	130,002,000	129,608,000	394,000	39
6/17/2011	130,405,000	130,002,000	403,000	40
6/24/2011	130,801,000	130,405,000	396,000	39
7/1/2011	131,200,000	130,801,000	399,000	40
7/8/2011	NA	131,200,000	NA	NA
7/15/2011	NA	NA	NA	NA
7/22/2011	NA	NA	NA	NA
7/29/2011	132,744,000	NA	NA	NA
8/5/2011	133,121,000	132,744,000	377,000	37
8/12/2011	133,488,000	133,121,000	367,000	36
8/19/2011	133,845,000	133,488,000	357,000	35
8/26/2011	134,217,000	133,845,000	372,000	37
9/2/2011	134,565,000	134,217,000	348,000	35
9/9/2011	134,931,000	134,565,000	366,000	36
9/16/2011	135,310,000	134,931,000	379,000	38
9/23/2011	135,687,000	135,310,000	377,000	37
9/30/2011	136,027,000	135,687,000	340,000	34
10/7/2011	136,392,000	136,027,000	365,000	36
10/14/2011	136,758,000	136,392,000	366,000	36
10/21/2011	137,120,000	136,758,000	362,000	36
10/28/2011	137,483,000	137,120,000	363,000	36
11/4/2011	137,841,000	137,483,000	358,000	36
11/11/2011	138,205,000	137,841,000	364,000	36
11/18/2011	138,565,000	138,205,000	360,000	36
11/25/2011	138,913,000	138,565,000	348,000	35
12/2/2011	139,270,000	138,913,000	357,000	35
12/9/2011	139,618,000	139,270,000	348,000	35
12/16/2011	139,968,000	139,618,000	350,000	35
12/23/2011	140,291,000	139,968,000	323,000	32
12/30/2011	140,606,000	140,291,000	315,000	31



**EW-1**  
**WEEKLY AVERAGE PUMPING RATES**  
**Pristine, Inc. Site**  
**Reading, Ohio**

Page 4 of 10

<u>Date</u>	<u>Current Reading<sup>(1)</sup></u>	<u>Previous Reading</u>	<u>Difference</u>	<u>Average Pumping Rate (gpm)<sup>(c)</sup></u>
1/6/2012	140,937,000	140,606,000	331,000	33
1/13/2012	141,206,000	140,937,000	269,000	27
1/20/2012	141,509,000	141,206,000	303,000	30
1/27/2012	141,694,000	141,509,000	185,000	18
2/3/2012	142,064,000	141,694,000	370,000	37
2/10/2012	142,415,000	142,064,000	351,000	35
2/17/2012	142,762,000	142,415,000	347,000	34
2/24/2012	143,103,000	142,762,000	341,000	34
3/2/2012	143,444,000	143,103,000	341,000	34
3/9/2012	143,782,000	143,444,000	338,000	34
3/16/2012	144,114,000	143,782,000	332,000	33
3/23/2012	144,438,000	144,114,000	324,000	32
3/30/2012	144,767,000	144,438,000	329,000	33
4/6/2012	145,111,000	144,767,000	344,000	34
4/13/2012	145,452,000	145,111,000	341,000	34
4/20/2012	145,621,000	145,452,000	169,000	17
4/27/2012	145,933,000	145,621,000	312,000	31
5/4/2012	146,269,000	145,933,000	336,000	33
5/11/2012	146,584,000	146,269,000	315,000	31
5/18/2012	146,926,000	146,584,000	342,000	34
5/25/2012	147,278,000	146,926,000	352,000	35
6/1/2012	147,631,000	147,278,000	353,000	35
6/8/2012	147,981,000	147,631,000	350,000	35
6/15/2012	148,328,000	147,981,000	347,000	34
6/22/2012	148,678,000	148,328,000	350,000	35
6/29/2012	149,028,000	148,678,000	350,000	35
7/6/2012	149,380,000	149,028,000	352,000	35
7/13/2012	149,735,000	149,380,000	355,000	35
7/20/2012	150,083,000	149,735,000	348,000	35
7/27/2012	150,433,000	150,083,000	350,000	35
8/3/2012	150,781,000	150,433,000	348,000	35
8/10/2012	151,132,000	150,781,000	351,000	35
8/17/2012	151,480,000	151,132,000	348,000	35
8/24/2012	151,828,000	151,480,000	348,000	35
8/31/2012	152,164,000	151,828,000	336,000	33
9/7/2012	152,502,000	152,164,000	338,000	34
9/14/2012	152,845,000	152,502,000	343,000	34
9/21/2012	153,191,000	152,845,000	346,000	34
9/28/2012	153,521,000	153,191,000	330,000	33
10/5/2012	153,864,000	153,521,000	343,000	34
10/12/2012	154,142,000	153,864,000	278,000	28
10/19/2012	154,469,000	154,142,000	327,000	32
10/26/2012	154,812,000	154,469,000	343,000	34
11/2/2012	155,142,000	154,812,000	330,000	33
11/9/2012	155,462,000	155,142,000	320,000	32
11/16/2012	155,766,000	155,462,000	304,000	30
11/23/2012	156,054,000	155,766,000	288,000	29
11/30/2012	156,346,000	156,054,000	292,000	29
12/6/2012	156,588,000	156,346,000	242,000	24
12/13/2012	156,883,000	156,588,000	295,000	29
12/22/2012	157,255,000	156,883,000	372,000	29
12/27/2012	157,465,000	157,255,000	210,000	29

**EW-1**  
**WEEKLY AVERAGE PUMPING RATES**  
**Pristine, Inc. Site**  
**Reading, Ohio**

Page 5 of 10

<u>Date</u>	<u>Current Reading</u> <sup>(1)</sup>	<u>Previous Reading</u>	<u>Difference</u>	<u>Average Pumping Rate (gpm)</u> <sup>(2)</sup>
1/3/2013	157,747,000	157,465,000	282,000	28
1/10/2013	158,057,000	157,747,000	310,000	31
1/17/2013	158,345,000	158,057,000	288,000	29
1/24/2013	158,640,000	158,345,000	295,000	29
1/31/2013	158,942,000	158,640,000	302,000	30
2/7/2013	159,274,000	158,942,000	332,000	33
2/14/2013	159,584,000	159,274,000	310,000	31
2/21/2013	159,919,000	159,584,000	335,000	33
2/28/2013	160,251,000	159,919,000	332,000	33
3/7/2013	160,432,000	160,251,000	181,000	18
3/14/2013	160,658,000	160,432,000	226,000	22
3/21/2013	160,967,000	160,658,000	309,000	31
3/28/2013	161,275,000	160,967,000	308,000	31
4/4/2013	161,562,000	161,275,000	287,000	28
4/11/2013	161,829,000	161,562,000	267,000	26
4/18/2013	162,117,000	161,829,000	288,000	29
4/25/2013	162,405,000	162,117,000	288,000	29
5/2/2013	162,585,000	162,405,000	180,000	18
5/9/2013	162,822,000	162,585,000	237,000	24
5/16/2013	163,117,000	162,822,000	295,000	29
5/23/2013	163,424,000	163,117,000	307,000	30
5/30/2013	163,737,000	163,424,000	313,000	31
6/6/2013	164,047,000	163,737,000	310,000	31
6/13/2013	164,350,000	164,047,000	303,000	30
6/20/2013	164,654,000	164,350,000	304,000	30
6/27/2013	164,959,000	164,654,000	305,000	30
7/4/2013	165,259,000	164,959,000	300,000	30
7/11/2013	165,554,000	165,259,000	295,000	29
7/18/2013	165,860,000	165,554,000	306,000	30
7/25/2013	166,166,000	165,860,000	306,000	30
8/1/2013	166,475,000	166,166,000	309,000	31
8/8/2013	166,611,000	166,475,000	136,000	13
8/15/2013	166,790,000	166,611,000	179,000	18
8/22/2013	167,095,000	166,790,000	305,000	30
8/29/2013	167,402,000	167,095,000	307,000	30
9/5/2013	167,617,000	167,402,000	215,000	21
9/12/2013	167,896,000	167,617,000	279,000	28
9/19/2013	168,207,000	167,896,000	311,000	31
9/26/2013	168,517,000	168,207,000	310,000	31
10/3/2013	168,828,000	168,517,000	311,000	31
10/10/2013	169,125,000	168,828,000	297,000	29
10/17/2013	169,434,000	169,125,000	309,000	31
10/24/2013	169,743,000	169,434,000	309,000	31
10/31/2013	170,051,000	169,743,000	308,000	31
11/7/2013	170,346,000	170,051,000	295,000	29
11/14/2013	170,647,000	170,346,000	301,000	30
11/21/2013	170,963,000	170,647,000	316,000	31
11/28/2013	171,225,000	170,963,000	262,000	26
12/5/2013	171,527,000	171,225,000	302,000	30
12/12/2013	171,830,000	171,527,000	303,000	30
12/19/2013	172,136,000	171,830,000	306,000	30
12/26/2013	172,434,000	172,136,000	298,000	30

**EW-1**  
**WEEKLY AVERAGE PUMPING RATES**  
Pristine, Inc Site  
Reading, Ohio

Page 6 of 10

<u>Date</u>	<u>Current Reading<sup>(1)</sup></u>	<u>Previous Reading</u>	<u>Difference</u>	<u>Average Pumping Rate (gpm)<sup>(2)</sup></u>
1/2/2014	172,733,000	172,434,000	299,000	30
1/9/2014	173,033,000	172,733,000	300,000	30
1/16/2014	173,336,000	173,033,000	303,000	30
1/23/2014	173,639,000	173,336,000	303,000	30
1/30/2014	173,947,000	173,639,000	308,000	31
2/6/2014	174,252,000	173,947,000	305,000	30
2/13/2014	174,554,000	174,252,000	302,000	30
2/20/2014	174,859,000	174,554,000	305,000	30
2/27/2014	175,161,000	174,859,000	302,000	30
3/6/2014	175,467,000	175,161,000	306,000	30
3/13/2014	175,771,000	175,467,000	304,000	30
3/20/2014	176,074,000	175,771,000	303,000	30
3/27/2014	176,381,000	176,074,000	307,000	30
4/3/2014	176,686,000	176,381,000	305,000	30
4/10/2014	176,988,000	176,686,000	302,000	30
4/17/2014	177,295,000	176,988,000	307,000	30
4/24/2014	177,604,000	177,295,000	309,000	31
5/1/2014	177,810,000	177,604,000	206,000	20
5/8/2014	177,934,000	177,810,000	124,000	12
5/15/2014	178,232,000	177,934,000	298,000	30
5/22/2014	178,543,000	178,232,000	311,000	31
5/29/2014	178,883,000	178,543,000	340,000	34
6/5/2014	179,217,000	178,883,000	334,000	33
6/12/2014	179,552,000	179,217,000	335,000	33
6/19/2014	179,890,000	179,552,000	338,000	34
6/26/2014	180,225,000	179,890,000	335,000	33
7/3/2014	180,563,000	180,225,000	338,000	34
7/10/2014	180,902,000	180,563,000	339,000	34
7/17/2014	181,238,000	180,902,000	336,000	33
7/24/2014	181,565,000	181,238,000	327,000	32
7/31/2014	181,908,000	181,565,000	343,000	34
8/7/2014	182,254,000	181,908,000	346,000	34
8/14/2014	182,592,000	182,254,000	338,000	34
8/21/2014	182,934,000	182,592,000	342,000	34
8/28/2014	183,275,000	182,934,000	341,000	34
9/4/2014	184,600,000	183,275,000	333,000	33
9/11/2014	184,930,000	184,600,000	330,000	33
9/18/2014	185,238,000	184,930,000	308,000	31
9/25/2014	185,574,000	185,238,000	336,000	33
10/2/2014	185,912,000	185,574,000	338,000	34
10/9/2014	186,248,000	185,912,000	336,000	33
10/16/2014	186,587,000	186,248,000	339,000	34
10/23/2014	186,930,000	186,587,000	343,000	34
10/30/2014	187,270,000	186,930,000	340,000	34
11/6/2014	187,616,000	187,270,000	346,000	34
11/13/2014	187,961,000	187,616,000	345,000	34
11/20/2014	188,305,000	187,961,000	344,000	34
11/27/2014	188,651,000	188,305,000	346,000	34
12/4/2014	188,995,000	188,651,000	344,000	34
12/11/2014	189,337,000	188,995,000	342,000	34
12/18/2014	189,684,000	189,337,000	347,000	34
12/25/2014	190,031,000	189,684,000	347,000	34

EW-1  
WEEKLY AVERAGE PUMPING RATES  
Pristine, Inc. Site  
Reading, Ohio

Page 7 of 10

<u>Date</u>	<u>Current Reading</u> <sup>(1)</sup>	<u>Previous Reading</u>	<u>Difference</u>	<u>Average Pumping Rate (gpm)</u> <sup>(2)</sup>
1/1/2015	190,380,000	190,031,000	349,000	35
1/8/2015	190,723,000	190,380,000	343,000	34
1/15/2015	191,066,000	190,723,000	343,000	34
1/22/2015	191,408,000	191,066,000	342,000	34
1/29/2015	191,750,000	191,408,000	342,000	34
2/5/2015	192,094,000	191,750,000	344,000	34
2/12/2015	192,437,000	192,094,000	343,000	34
2/19/2015	192,782,000	192,437,000	345,000	34
2/26/2015	193,113,000	192,782,000	331,000	33
3/5/2015	193,416,000	193,113,000	303,000	30
3/12/2015	193,740,000	193,416,000	324,000	32
3/19/2015	194,084,000	193,740,000	344,000	34
3/26/2015	194,431,000	194,084,000	347,000	34
4/2/2015	194,780,000	194,431,000	349,000	35
4/9/2015	195,125,000	194,780,000	345,000	34
4/16/2015	195,472,000	195,125,000	347,000	34
4/23/2015	195,817,000	195,472,000	345,000	34
4/30/2015	196,089,000	195,817,000	272,000	27
5/7/2015	196,208,000	196,089,000	119,000	12
5/14/2015	196,556,000	196,208,000	348,000	35
5/21/2015	196,773,000	196,556,000	217,000	22
5/28/2015	196,868,000	196,773,000	95,000	9
6/4/2015	197,218,000	196,868,000	350,000	35
6/11/2015	197,569,000	197,218,000	351,000	35
6/18/2015	197,918,000	197,569,000	349,000	35
6/25/2015	198,265,000	197,918,000	347,000	34
7/2/2015	198,612,000	198,265,000	347,000	34
7/9/2015	198,962,000	198,612,000	350,000	35
7/16/2015	199,305,000	198,962,000	343,000	34
7/23/2015	199,649,000	199,305,000	344,000	34
7/30/2015	199,998,000	199,649,000	349,000	35
8/6/2015	200,357,000	199,998,000	359,000	36
8/13/2015	200,721,000	200,357,000	364,000	36
8/20/2015	201,084,000	200,721,000	363,000	36
8/27/2015	201,445,000	201,084,000	361,000	36
9/3/2015	201,801,000	201,445,000	356,000	35
9/10/2015	202,162,000	201,801,000	361,000	36
9/17/2015	202,523,000	202,162,000	361,000	36
9/24/2015	202,888,000	202,523,000	365,000	36
10/1/2015	203,250,000	202,888,000	362,000	36
10/8/2015	203,618,000	203,250,000	368,000	37
10/15/2015	203,960,000	203,618,000	342,000	34
10/22/2015	204,317,000	203,960,000	357,000	35
10/29/2015	204,659,000	204,317,000	342,000	34
11/5/2015	205,021,000	204,659,000	362,000	36
11/12/2015	205,382,000	205,021,000	361,000	36
11/19/2015	205,725,000	205,382,000	343,000	34
11/26/2015	206,082,000	205,725,000	357,000	35
12/3/2015	206,438,000	206,082,000	356,000	35
12/10/2015	206,794,000	206,438,000	356,000	35
12/17/2015	207,149,000	206,794,000	355,000	35
12/24/2015	207,473,000	207,149,000	324,000	32
12/31/2015	207,823,000	207,473,000	350,000	35

**EW-1**  
**WEEKLY AVERAGE PUMPING RATES**  
**Pristine, Inc. Site**  
**Reading, Ohio**

Page 8 of 10

<u>Date</u>	<u>Current Reading<sup>(1)</sup></u>	<u>Previous Reading</u>	<u>Difference</u>	<u>Average Pumping Rate (gpm)<sup>(2)</sup></u>
1/7/2016	208,175,000	207,823,000	352,000	35
1/14/2016	208,524,000	208,175,000	349,000	35
1/21/2016	208,879,000	208,524,000	355,000	35
1/28/2016	209,235,000	208,879,000	356,000	35
2/4/2016	209,574,000	209,235,000	339,000	34
2/11/2016	209,931,000	209,574,000	357,000	35
2/18/2016	210,288,000	209,931,000	357,000	35
2/25/2016	210,640,000	210,288,000	352,000	35
3/3/2016	210,995,000	210,640,000	355,000	35
3/10/2016	211,353,000	210,995,000	358,000	36
3/17/2016	211,704,000	211,353,000	351,000	35
3/24/2016	212,061,000	211,704,000	357,000	35
3/31/2016	212,417,000	212,061,000	356,000	35
4/7/2016	212,757,000	212,417,000	340,000	34
4/14/2016	213,108,000	212,757,000	351,000	35
4/21/2016	213,415,000	213,108,000	307,000	30
4/28/2016	213,823,000	213,415,000	408,000	40
5/5/2016	214,182,000	213,823,000	359,000	36
5/12/2016	214,541,000	214,182,000	359,000	36
5/19/2016	214,764,000	214,541,000	223,000	22
5/26/2016	214,942,000	214,764,000	178,000	18
6/2/2016	215,284,000	214,942,000	342,000	34
6/9/2016	215,630,000	215,284,000	346,000	34
6/16/2016	215,978,000	215,630,000	348,000	35
6/23/2016	216,316,000	215,978,000	338,000	34
6/30/2016	216,636,000	216,316,000	320,000	32
7/7/2016	216,973,000	216,636,000	337,000	33
7/14/2016	217,311,000	216,973,000	338,000	34
7/21/2016	217,640,000	217,311,000	329,000	33
7/28/2016	217,974,000	217,640,000	334,000	33
8/4/2016	218,308,000	217,974,000	334,000	33
8/11/2016	218,641,000	218,308,000	333,000	33
8/18/2016	218,962,000	218,641,000	321,000	32
8/25/2016	219,293,000	218,962,000	331,000	33
9/1/2016	219,621,000	219,293,000	328,000	33
9/8/2016	219,945,000	219,621,000	324,000	32
9/15/2016	220,275,000	219,945,000	330,000	33
9/22/2016	220,608,000	220,275,000	333,000	33
9/29/2016	220,940,000	220,608,000	332,000	33
10/6/2016	221,273,000	220,940,000	333,000	33
10/13/2016	221,606,000	221,273,000	333,000	33
10/20/2016	221,935,000	221,606,000	329,000	33
10/27/2016	222,256,000	221,935,000	321,000	32
11/3/2016	222,582,000	222,256,000	326,000	32
11/10/2016	222,911,000	222,582,000	329,000	33
11/17/2016	223,241,000	222,911,000	330,000	33
11/24/2016	223,571,000	223,241,000	330,000	33
12/1/2016	223,898,000	223,571,000	327,000	32
12/8/2016	224,228,000	223,898,000	330,000	33
12/15/2016	224,556,000	224,228,000	328,000	33
12/22/2016	224,871,000	224,556,000	315,000	31
12/29/2016	225,213,000	224,871,000	342,000	34
1/5/2017	225,579,000	225,213,000	366,000	36
1/12/2017	225,946,000	225,579,000	367,000	36
1/19/2017	226,312,000	225,946,000	366,000	36
1/26/2017	226,678,000	226,312,000	366,000	36

EW-1  
WEEKLY AVERAGE PUMPING RATES  
Pristine, Inc. Site  
Reading, Ohio

Page 9 of 10

<u>Date</u>	<u>Current Reading</u> <sup>(1)</sup>	<u>Previous Reading</u>	<u>Difference</u>	<u>Average Pumping Rate (gpm)</u> <sup>(c)</sup>
2/2/2017	227,041,000	226,678,000	363,000	36
2/9/2017	227,395,000	227,041,000	354,000	35
2/16/2017	227,751,000	227,395,000	356,000	35
2/23/2017	228,114,000	227,751,000	363,000	36
3/2/2017	228,479,000	228,114,000	365,000	36
3/9/2017	228,851,000	228,479,000	372,000	37
3/16/2017	229,221,000	228,851,000	370,000	37
3/23/2017	229,586,000	229,221,000	365,000	36
3/30/2017	229,954,000	229,586,000	368,000	37
4/6/2017	230,317,000	229,954,000	363,000	36
4/13/2017	230,683,000	230,317,000	366,000	36
4/20/2017	231,047,000	230,683,000	364,000	36
4/27/2017	231,416,000	231,047,000	369,000	37
5/4/2017	231,779,000	231,416,000	363,000	36
5/11/2017	232,145,000	231,779,000	366,000	36
5/18/2017	232,316,000	232,145,000	171,000	17
5/25/2017	232,460,000	232,316,000	144,000	14
6/1/2017	232,767,000	232,460,000	307,000	30
6/8/2017	233,158,000	232,767,000	391,000	39
6/15/2017	233,549,000	233,158,000	391,000	39
6/22/2017	233,942,000	233,549,000	393,000	39
6/29/2017	234,334,000	233,942,000	392,000	39
7/6/2017	234,727,000	234,334,000	393,000	39
7/13/2017	235,111,000	234,727,000	384,000	38
7/20/2017	235,494,000	235,111,000	383,000	38
7/27/2017	235,877,000	235,494,000	383,000	38
8/3/2017	236,262,000	235,877,000	385,000	38
8/10/2017	236,648,000	236,262,000	386,000	38
8/17/2017	237,040,000	236,648,000	392,000	39
8/24/2017	237,420,000	237,040,000	380,000	38
8/31/2017	237,746,000	237,420,000	326,000	32
9/7/2017	238,124,000	237,746,000	378,000	38
9/14/2017	238,502,000	238,124,000	378,000	38
9/21/2017	238,879,000	238,502,000	377,000	37
9/28/2017	239,256,000	238,879,000	377,000	37
10/5/2017	239,632,000	239,256,000	376,000	37
10/12/2017	240,006,000	239,632,000	374,000	37
10/19/2017	240,383,000	240,006,000	377,000	37
10/26/2017	240,770,000	240,383,000	387,000	38
11/2/2017	241,153,000	240,770,000	383,000	38
11/9/2017	241,424,000	241,153,000	271,000	27
11/16/2017	241,768,000	241,424,000	344,000	34
11/23/2017	242,111,000	241,768,000	343,000	34
11/30/2017	242,457,000	242,111,000	346,000	34
12/7/2017	242,803,000	242,457,000	346,000	34
12/14/2017	243,152,000	242,803,000	349,000	35
12/21/2017	243,503,000	243,152,000	351,000	35
12/28/2017	243,849,000	243,503,000	346,000	34
1/4/2018	244,172,000	243,849,000	323,000	32
1/11/2018	244,521,000	244,172,000	349,000	35

**EW-1**  
**WEEKLY AVERAGE PUMPING RATES**  
**Pristine, Inc Site**  
**Reading, Ohio**

Page 10 of 10

<u>Date</u>	<u>Current Reading<sup>(1)</sup></u>	<u>Previous Reading</u>	<u>Difference</u>	<u>Average Pumping Rate (gpm)<sup>(2)</sup></u>
1/18/2018	244,890,000	244,521,000	369,000	37
1/25/2018	245,246,000	244,890,000	356,000	35
2/1/2018	245,595,000	245,246,000	349,000	35
2/8/2018	245,958,000	245,595,000	363,000	36
2/15/2018	246,308,000	245,958,000	350,000	35
2/22/2018	246,656,000	246,308,000	348,000	35
3/1/2018	247,003,000	246,656,000	347,000	34
3/8/2018	247,376,000	247,003,000	373,000	37
3/15/2018	247,726,000	247,376,000	350,000	35
3/22/2018	248,092,000	247,726,000	366,000	36
3/29/2018	248,443,000	248,092,000	351,000	35
4/5/2018	248,792,000	248,443,000	349,000	35
4/12/2018	249,148,000	248,792,000	356,000	35
4/19/2018	249,502,000	249,148,000	354,000	35
4/26/2018	249,860,000	249,502,000	358,000	36
5/5/2018	250,321,000	249,860,000	461,000	46
5/12/2018	250,678,000	250,321,000	357,000	35
5/19/2018	250,806,000	250,678,000	128,000	13
5/26/2018	251,049,000	250,806,000	243,000	24
6/2/2018	251,371,000	251,049,000	322,000	32
6/9/2018	251,735,000	251,371,000	364,000	36
6/16/2018	252,095,000	251,735,000	360,000	36
6/23/2018	252,455,000	252,095,000	360,000	36
6/30/2018	252,813,000	252,455,000	358,000	36
7/7/2018	253,169,000	252,813,000	356,000	35
7/14/2018	253,528,000	253,169,000	359,000	36
7/21/2018	253,849,000	253,528,000	321,000	32
7/28/2018	254,010,000	253,849,000	161,000	16
8/4/2018	254,375,000	254,010,000	365,000	36
8/11/2018	254,717,000	254,375,000	342,000	34
8/18/2018	255,060,000	254,717,000	343,000	34
8/25/2018	255,419,000	255,060,000	359,000	36
9/1/2018	255,771,000	255,419,000	352,000	35
9/8/2018	256,131,000	255,771,000	360,000	36
9/15/2018	256,447,000	256,131,000	316,000	31
9/22/2018	256,700,000	256,447,000	253,000	25
9/29/2018	257,037,000	256,700,000	337,000	33

**Notes**

- (1) Volumes are based upon instantaneous readings
- (2) Refer to "Summary of Groundwater and ISVE Downtime" for an explanation of reduced pumping rate
- (3) Estimated value based on PLC fault on 9/1/14
- (4) Estimated value based on data loss from Duke energy fuse malfunction on 10/14/15
- NA - not available

## **Attachment 2**

# **Summary of Treatment System Analytical Results**



	July 2018				August 2018				September 2018				
	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4	Week 5	Week 1	Week 2	Week 3	Week 4
<u>150 Influent to Treatment Facility</u>													
Sample ID		PW-1078											
Sample Date		7/11/18											
<i>General Inorganics (mg/L)</i>													
Alkalinity, Total (As CaCO <sub>3</sub> )	--	380	--	--	--	--	--	--	--	--	--	--	--
Hardness	--	480	--	--	--	--	--	--	--	--	--	--	--
Total Dissolved Solids (TDS)	--	1300	--	--	--	--	--	--	--	--	--	--	--
Total Suspended Solids (TSS)	--	ND (4.0)	--	--	--	--	--	--	--	--	--	--	--
<i>Metals (mg/L)</i>													
Arsenic	--	ND (0.010)	--	--	--	--	--	--	--	--	--	--	--
Beryllium	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium	--	120	--	--	--	--	--	--	--	--	--	--	--
Copper	--	ND (0.021)	--	--	--	--	--	--	--	--	--	--	--
Iron	--	0.93	--	--	--	--	--	--	--	--	--	--	--
Lead	--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium	--	41	--	--	--	--	--	--	--	--	--	--	--
Mercury	--	ND (0.00020)	--	--	--	--	--	--	--	--	--	--	--
Nickel	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	--	ND (0.050)	--	--	--	--	--	--	--	--	--	--	--
<i>Pesticides and PCBs (ug/L)</i>													
4,4'-DDT	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-BHC	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC (Lindane)	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1016 (PCB-1016)	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Semi Volatile Organic Compounds (ug/L)</i>													
2,4-Dichlorophenol	--	ND (9.5)	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	--	ND (9.5)	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	--	ND (9.5)	--	--	--	--							

[illegible]

[illegible]

[illegible]

Chemical Name	Concentration (ppm)	Detection Limit (ppm)	Result
1,1,1-Trichloroethane	--	ND (5.0)	--
1,1,2,2-Tetrachloroethane	--	ND (5.0)	--
1,1,2-Trichloroethane	--	ND (5.0)	--
1,1-Dichloroethene	--	ND (5.0)	--
1,2-Dichlorobenzene	--	ND (5.0)	--
1,2-Dichloroethane	--	9.1	--
1,3-Dichlorobenzene	--	ND (5.0)	--
1,4-Dichlorobenzene	--	ND (5.0)	--
2-Butanone (Methyl Ethyl Ketone)	--	ND (20)	--
Acetone	--	ND (20)	--
Benzene	--	ND (5.0)	--
Carbon tetrachloride	--	ND (5.0)	--
Chlorobenzene	--	ND (5.0)	--
Chloroform (Trichloromethane)	--	ND (5.0)	--
Ethylbenzene	--	ND (5.0)	--
Methylene chloride	--	ND (5.0)	--
Styrene	--	ND (5.0)	--
Tetrachloroethene	--	ND (5.0)	--

[illegible]

**SUMMARY OF ANALYTICAL RESULTS**  
**TREATMENT FACILITY, PRISTINE, INC. SITE, READING, OHIO**

### 150 Between Carbon Beds

Sample ID  
Sample Date

**Volatile Organic Compounds (ug/L)**

[illegible]

### 150 Cartridge Filter

Sample ID  
Sample Date

## Metals (mg/L)

[illegible]

### 300 Influent to Treatment Facility

Sample ID  
Sample Date

**General Inorganics (mg/L)**

[illegible]

## Metals (mg/L)

[illegible]

[illegible]





[illegible]

[illegible]

**Metals (mg/L)**

### General Inorganics

[illegible]

## ATTACHMENT 2

**SUMMARY OF ANALYTICAL RESULTS**  
**TREATMENT FACILITY, PRISTINE, INC. SITE, READING, OHIO**

	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4	Week 5	Week 1	Week 2	Week 3	Week 4
450 Effluent from Treatment Facility													
Sample ID	DW-1231	DW-1232	DW-1233	DW-1234	DW-1235	DW-1238	DW-1240	DW-1241	DW-1242	DW-1243	DW-1244	DW-1245	DW-1246
Sample Date	7/5/18	7/11/18	7/18/18	7/26/18	8/2/18	8/9/18	8/16/18	8/23/18	8/30/18	9/5/18	9/12/18	9/19/18	9/25/18
General Inorganics													
Ammonia (mg/L)	ND (0.20)	--	--	--	ND (0.20)	--	--	--	--	ND (0.20)	--	--	--
Chemical Oxygen Demand (COD) (mg/L)	38	--	--	--	ND (10)	--	--	--	--	ND (10)	--	--	--
Fluoride (mg/L)	0.19	--	--	--	0.21	--	--	--	--	0.21	--	--	--
pH, lab	7.7 J	--	7.1	--	7.7	--	7.6	--	--	7.8	--	--	7.8
Total Dissolved Solids (TDS) (mg/L)	1400	--	--	--	1400	--	--	--	--	1300	--	--	--
Total Suspended Solids (TSS) (mg/L)	ND (4.0)	--	--	--	ND (4.0)	--	--	--	--	ND (4.0)	--	--	--
Metals (mg/L)													
Iron	ND (0.100)	--	--	--	0.13	--	--	--	--	ND (0.100)	--	--	--
Mercury (ng/L)	4.9	--	--	--	12	--	--	--	--	10	--	--	--
Silver	ND(0.0040)	--	--	--	ND(0.0040)	--	--	--	--	ND(0.0040)	--	--	--
Zinc	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.059	0.051	ND(0.050)	ND(0.050)	0.059	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)
Semi Volatile Organic Compounds (ug/L)													
bis(2-Ethylhexyl)phthalate	ND(10)	--	--	--	ND(10)	--	--	--	--	ND(10)	--	--	--
Di-n-butylphthalate	ND(10)	--	--	--	ND(10)	--	--	--	--	ND(10)	--	--	--
Volatile Organic Compounds (ug/L)													
1,1,1-Trichloroethane	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
1,1,2-Trichloroethane	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
1,1-Dichloroethene	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
1,2-Dichlorobenzene	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
1,2-Dichloroethane	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
2-Butanone (Methyl Ethyl Ketone)	ND(20)	--	--	--	ND(20)	--	--	--	--	ND(20)	--	--	--
Benzene	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
Chlorobenzene	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
Chloroform (Trichloromethane)	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
Ethylbenzene	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
Methylene chloride	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
Styrene	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
Tetrachloroethene	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
Toluene	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
trans-1,2-Dichloroethene	ND(2.5)	--	--	--	ND(2.5)	--	--	--	--	ND(2.5)	--	--	--
Trichloroethene	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
Vinyl chloride	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
Xylene (total)	ND(5.0)	--	--	--	ND(5.0)	--	--	--	--	ND(5.0)	--	--	--
Pesticides (ug/L)													
4,4'-DDE	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-BHC	--	--	--	--	--	--	--	--	--	--	--	--	--
beta-BHC	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--	--	--	--	--
gamma-BHC (Lindane)	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	--	--	--	--	--	--	--	--	--	--	--	--	--

# **Attachment 3**

## **Summary of Operational & Maintenance Monitoring**

TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

H478 P. 001/002

Task No.	Program Description	Item/Description	Notes	Date Completed
Task 1	Cap System Maintenance	Inspect security fencing for forced entry or damage * Inspect Site storm water drainage system (swales and perimeter piping) * Inspect Site cover for erosion * Inspect security fencing for erosion under chain link fabric	All OK	7/7/18 1425
Task 2	ISVE System Maintenance	Inspect air compressor for oil level, noise or vibration and drain condensate Inspect pneumatic pumps for general operation Clean air compressor inlet filter and external parts of compressor and drive Manually test air compressor relief valve Inspect all pressure gauges, valves and meters for leaks and proper operation	System f	7/7/18
Task 3	Extraction Well Maintenance	Inspect well locks, covers and electrical structures for damage/signs of forced entry Check flow meters to ensure proper operation Check 3 offsite chambers for any indications of leakage.	All O	7/7/18 1405
Task 4	Treatment System Monitoring	Check air quality in building Conduct general visual inspection of treatment building for unusual conditions (corrosion/leaks/damage) Check supply of sampling equipment Check supply of safety equipment, tools and spare parts Check flow meters to ensure proper operation	Drips at filter bags All others OK	7/7/18 1438

Notes:

Inspection frequencies may be revised based on field conditions

\* This activity is seasonal dependent

1. Attach Field Data Record
1. Copy Project Manager
1. Field File

2018/07/07 17:10



TABLE 1  
WEEKLY CRATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

#478 P. 002/002

Task No.	Program Description	Location	Measurement	Method	Reading	Date Completed
Task 5	ISVE System Monitoring	Vapor collection piping (at treatment building)		CEM	N/A	7/7/18
Task 6	Shallow Groundwater Monitoring	Zone A forcemain (at treatment building)	(cumulative amount meter pumped)	Flow meter	Zone A - @ System	7/7/18
		Zone B forcemain (at treatment building)	(cumulative amount meter pumped)	Flow meter	Zone B - @ off	7/7/18
Task 7	Process Vessel Monitoring	Inspect caustic and acid tanks (during piping) Inspect carbon vessels		No Leaks All OK		7/7/18 1418
Task 8	Extraction Well Monitoring	Control room	Flowing rate	Flow meter	EW1- 41.7 EW2- off EW3- EW4- ↓ EW5-	7/7/18 1435
Task 9	ISVE Piping	Zone B	V- Removal	Portable Pump	N/A	7/7/18
Task 10	Hazardous Waste Storage	Filterpress Room	1ct Rolloff for Leaks	Visual Inspection	No Leaks	7/7/18 1401
Task 11	Testing of Eye Wash Stations (3 total)	Chemical Storage Area Maintenance Room Near Catox Scrubber	Water through unit	Press handle	All OK	7/7/18 1430
Task 12	Check Contents of First Aid Kit	Control Room Maintenance Room	C& Inspect Container	Visual Inspection	All OK	7/7/18 1433

2018/07/07 17:10  
Attach Field Data Record  
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Field File

Operator Signature

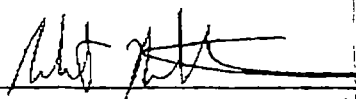
  
Robert Robertson



TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

Task No.	Program Description	Item/Description	Notes	Date Completed
Task 1	Cap System Maintenance	Inspect security fencing for forced entry or damage * Inspect Site storm water drainage system (swales and perimeter piping) * Inspect Site cover for erosion * Inspect security fencing for erosion under chain link fabric	All c	7/14/18 1305
Task 2	ISVE System Maintenance	Inspect air compressor for oil level, noise or vibration and drain condensate Inspect pneumatic pumps for general operation Clean air compressor inlet filter and external parts of compressor and drive Manually test air compressor relief valve Inspect all pressure gauges, valves and meters for leaks and proper operation	Sys. f	7/14/18
Task 3	Extraction Well Maintenance	Inspect well locks, covers and electrical structures for damage/signs of forced entry Check flow meters to ensure proper operation Check 5 offsite chambers for any indications of leakage	All c	7/14/18 1250
Task 4	Treatment System Monitoring	Check air quality in building Conduct general visual inspection of treatment building for unusual conditions (corrosion/leaks/damage) Check supply of sampling equipment Check supply of safety equipment, tools and spare parts Check flow meters to ensure proper operation	Drips at housings All oth OK	7/14/18 1315

#### Notes:

Inspection frequencies may be revised based on field conditions

\* This activity is seasonal dependent

2018/07/14 14:40

1. Attach Field Data Record
2. Copy Project Manager
3. Field File



H481\_P.002/002

2018/07/14 14:41

TABLE 1  
WEEPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

Page 2 of 2

Task No.	Program Description	Location	Measurement	Method	Reading	Date Completed
Task 5	ISVE System Monitoring	Vapor collection pipes/OC (at treatment building)		CEM	N/A	7/14/18
Task 6	Shallow Groundwater Monitoring	Zone A forcemain (at flow (cumulative amount treatment building) of water pumped)		Flow meter	Zone A - @ System	7/14/18
		Zone B forcemain (at flow (cumulative amount treatment building) of water pumped)		Flow meter	Zone B - @ off	7/14/18
Task 7	Process Vessel Monitoring	Inspect caustic and s (including piping)			All OK NO Leaks	7/14/18
Task 8	Extraction Well Monitoring	Control room	Pumping rate	Flow meter	EW1-41.7 EW2-off EW3- EW4- EW5-↓	7/14/18
Task 9	ISVE Piping	Zone B	Water Removal	Portable Pump	N/A	7/14/18
Task 10	Hazardous Waste Storage	Filterpress Room	Inspect Rolloff for Leaks	Visual Inspection	NO Leaks	7/14/18
Task 11	Testing of Eye Wash Stations (3 total)	Chemical Storage Area Maintenance Room Near Caton Scrubber	Run water through unit	Press handle	All OK	7/14/18
Task 12	Check Contents of First Aid Kit	Control Room Maintenance Room	Open & Inspect Container	Visual Inspection	All OK	7/14/18

1300

1313

1245

1308

1310

Operator Signature

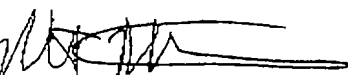
  
Robert Robertson

TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
ISTINE, INC. SITE - #3250

Task No.	Program Description	Item/Description	Notes	Date Completed
Task 1	Cap System Maintenance	Inspect security fencing for forced entry (age) * Inspect Site storm water drainage systems and perimeter piping) * Inspect Site cover for erosion * Inspect security fencing for erosion main link fabric	All OK	7/21/18 1340
Task 2	ISVE System Maintenance	Inspect air compressor for oil level, noise/vibration and drain condensate Inspect pneumatic pumps for general operation Clean air compressor inlet filter and external parts of compressor and drive Manually test air compressor relief valve Inspect all pressure gauges, valves and air for leaks and proper operation	System off	7/21/18
Task 3	Extraction Well Maintenance	Inspect well locks, covers and electrical units for damage/signs of forced entry Check flow meters to ensure proper operation Check 5 offsite chambers for any indicative leakage.	System down	7/21/18 1325
Task 4	Treatment System Monitoring	Check air quality in building Conduct general visual inspection of treat building for unusual conditions (corrosion/leaks/damage) Check supply of sampling equipment Check supply of safety equipment, tools spare parts Check flow meters to ensure proper operation	System down	7/21/18 1355

Notes:

Inspection frequencies may be revised based on field conditions

\* This activity is seasonal dependent

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2. Copy Project Manager
3. Field File

#483-P.002/002

TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

Page 2 of 2

Task	Program Description	Location	Measurement	Method	Reading	Date Completed
Task 1	ISVE System Monitoring	Vapor collection piping (at treatment building)	VOC	CFM	N/A	7/21/18
Task 6	Shallow Groundwater Monitoring	Zone A forcemain (at treatment building)	Flow (cumulative amount of water pumped)	Flow meter	Zone A - @ 4pm	7/21/18
		Zone B forcemain (at treatment building)	Flow (cumulative amount of water pumped)	Flow meter	Zone B - @ 2:45 P	7/21/18
Task 7	Process Vessel Monitoring	Inspect caustic and acid tanks (including piping) Inspect carbon vessels		All OK	no Leaks	7/21/18 1335
Task 8	Extraction Well Monitoring	Control room	Pumping rate	Flow meter	EW1- System EW2- off/ EW3- down EW4- EW5-	7/21/18 1353
Task 9	ISVE Piping	Zone B	Water Removal	Portable Pump	N/A	7/21/18
Task 1	Hazardous Waste Storage	Filterpress Room	Inspect Roll off for Leaks Drums	Visual Inspection	no Leaks	7/21/18 1320
Task 1	Testing of Eye Wash Stations (3 total)	Chemical Storage Area Maintenance Room Near Catox Scrubber	Run water through unit	Press handle	All OK	7/21/18 1345
Task 1	Check Contents of First Aid Kit	Control Room Maintenance Room	Open & Inspect Container	Visual Inspection	All OK	7/21/18 1350

2018/07/21 17:21  
Field Data Record  
Coject Manager  
File

Operator Signature

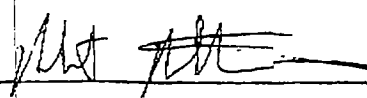


TABLE 1  
WELY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

#484 P.001/002

Task No.	Program Description	Item/Description	Notes	Date Completed
Task 1	Cap System Maintenance	Inspect security fencing forced entry or damage * Inspect Site storm waldrainage system (swales and perimeter piping) * Inspect Site cover for ion * Inspect security fence for erosion under chain link fabric	All OK	7/28/18 1245
Task 2	ISVE System Maintenance	Inspect air compressor oil level, noise or vibration and drain condensate Inspect pneumatic pump general operation Clean air compressor in filter and external parts of compressor and drive Manually test air compor relief valve Inspect all pressure gau valves and meters for leaks and proper operation	System off	7/28/18
Task 3	Extraction Well Maintenance	Inspect well locks, covered electrical structures for damage/signs of forced entry Check flow meters to ensure proper operation Check 5 offsite chamber any indications of leakage.	All OK	7/28/18 1230
Task 4	Treatment System Monitoring	Check air quality in build Conduct general visual section of treatment building for unusual conditions (corrosion/leaks/damage) Check supply of sampling equipment Check supply of safety equipment, tools and spare parts Check flow meters to ensure proper operation	Drips at filter housings will monitor for repairs All others OK	7/28/18 1258

Notes:

Inspection frequencies may be revised based on field conditions

\* This activity is seasonal dependent

- 14. Attach Field Data Record
- 14. Copy Project Manager
- 14. Field File

2018/07/28, 14:14



TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITOR  
PRISTINE, INC. SITE - #3250

#484-P-002/002

Task No.	Program Description	Location	Measurement	Method	Read	Date Completed
Task 5	ISVE System Monitoring	Vapor collection piping (at treatment building)	VOC	CEM		7/28/18
Task 6	Shallow Groundwater Monitoring	Zone A forcemain (at treatment building)	Flow (cumulative amount of water pumped)	Flow meter	Zone system	7/28/18
		Zone B forcemain (at treatment building)	Flow (cumulative amount of water pumped)	Flow meter	Zone off	7/28/18
Task 7	Process Vessel Monitoring	Inspect caustic and acid tanks (including piping) Inspect carbon vessels		All OK no		7/28/18
Task 8	Extraction Well Monitoring	Control room	Pumping rate	Flow meter	EW1- EW2- EW3- EW4- EW5-	7/28/18
Task 9	ISVE Piping	Zone B	Water Removal	Portable Pump		7/28/18
Task 10	Hazardous Waste Storage	Filterpress Room	Inspect Roll-off for Leaks Drums	Visual Inspection	NLS	7/28/18
Task 11	Testing of Eye Wash Stations (3 total)	Chemical Storage Area Maintenance Room Near Catox Scrubber	Run water through unit	Press handle	K	7/28/18
Task 12	Check Contents of First Aid Kit	Control Room Maintenance Room	Open & Inspect Container	Visual Inspection	K	7/28/18

1240

1255

1225

1250

1253

2018/07/28 14:14

Attach Field Data Record  
Copy Project Manager  
Field File

Operator Signature

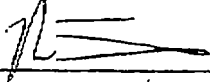
  
Robertson

TABLE 1  
WEEKLY CATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

#487 P. 001/002

Task No.	Program Description	Item/Description	Notes	Date Completed
Task 1	Cap System Maintenance	Inspect security fencing for force or damage * Inspect Site storm water drainage (swales and perimeter piping) * Inspect Site cover for erosion * Inspect security fencing for eroded chain link fabric	All OK	8/4/18 1320
Task 2	ISVE System Maintenance	Inspect air compressor for oil level or vibration and drain condensate Inspect pneumatic pumps for generation Clean air compressor inlet filter and parts of compressor and drive Manually test air compressor relief Inspect all pressure gauges, valves for leaks and proper operation	System off	8/4/18
Task 3	Extraction Well Maintenance	Inspect well locks, covers and structures for damage/signs of forced entry Check flow meters to ensure proper operation Check 5 offsite chambers for any signs of leakage	All OK	8/4/18 1300
Task 4	Treatment System Monitoring	Check air quality in building Conduct general visual inspection of building for unusual conditions (corrosion/leaks/damage) Check supply of sampling equipment Check supply of safety equipment and spare parts Check flow meters to ensure proper operation	Drips at Filter housings will monitor for repairs. All others OK	8/4/18 1335

Notes:

Inspection frequencies may be revised based on field conditions

\* This activity is seasonal dependent

- 2018/08/04, 15:34 Attach Field Data Record
- Copy Project Manager
- Field File



TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

Page 2 of 2

#487 P.002/002

Task	Program Description	Location	Measurement	Method	Reading	Date Completed
Task	ISVE System Monitoring	Vapor collection piping (at treatment building)	VOC	CEM	N/A	8/4/18
Task	Shallow Groundwater Monitoring	Zone A forcemain (at treatment building)	Flow (cumulative amount of water pumped)	Flow meter	Zone A - @ 2m	8/4/18
		Zone B forcemain (at treatment building)	Flow (cumulative amount of water pumped)	Flow meter	Zone B - @ off	8/4/18
Task	Process Vessel Monitoring	Inspect caustic and acid tanks(including piping) Inspect carbon vessels		All OK no Leaks		8/4/18
Task	Extraction Well Monitoring	Control room	Pumping rate	Flow meter	EW1- 41.9 EW2- off FW3- EW4- ↓ EW5- ↓	8/4/18
Task	ISVE Piping	Zone B	Water Removal	Portable Pump	N/A	8/4/18
Task	Hazardous Waste Storage	Filterpress Room	Inspect <del>Bottom</del> for Leaks Drums	Visual Inspection	NO Leaks	8/4/18
Task	Testing of Eye Wash Stations (3 total)	Chemical Storage Area Maintenance Room Near Catox Scrubber	Run water through unit	Press handle	All OK	8/4/18
Task	Check Contents of First Aid Kit	Control Room Maintenance Room	Open & Inspect Container	Visual Inspection	All OK	8/4/18

1315

1333

1255

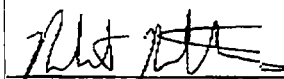
1325

1330

2018/08/04, 15:34

Field Data Record  
Project Manager  
File

Operator Signature

  
Robert Rolson



#493 P. 001/002

TABLE 1  
WEI OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

Task No.	Program Description	Item/Description	Notes	Date Completed
Task 1	Cap System Maintenance	Inspect security fencing for entry or damage * Inspect Site storm waste system (swales and perimeter piping) * Inspect Site cover for * Inspect security fence for erosion under chain link fabric	All OK	8/11/18 1320
Task 2	ISVE System Maintenance	Inspect air compressor level, noise or vibration and drain condensate Inspect pneumatic pump general operation Clean air compressor in and external parts of compressor and drive Manually test air comp relief valve Inspect all pressure gauges and meters for leaks and proper operation	System off	8/11/18
Task 3	Extraction Well Maintenance	Inspect well locks, cover electrical structures for damage/signs of forced entry Check flow meters to proper operation Check 5 offsite chamberly indications of leakage.	All OK	8/11/18 1305
Task 4	Treatment System Monitoring	Check air quality in building Conduct general visual inspection of treatment building for unusual conditions (corrosion/leaks/damage) Check supply of sampling equipment Check supply of safety tent, tools and spare parts Check flow meters to proper operation	Drips at filter housings and FFT #2 pump. Will monitor for repairs. All others OK	8/11/18 1335

Notes:

Inspection frequencies may be revised based on field conditions

\* This activity is seasonal dependent

2018/08/11 13:56 Attach Field Data Record  
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#493 P. 002/002  
2018/08/11 14:56

TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

Task No.	Program Description	Location	Measurement	Method	Reading	Date Completed
Task 5	ISVE System Monitoring	Vapor collection piping (at treatment building)	VOC	CEM	11	8/11/18
Task 6	Shallow Groundwater Monitoring	Zone A forcemain (at treatment building)	Flow (cumulative amount of water pumped)	Flow meter	Zone A - System	8/11/18
		Zone B forcemain (at treatment building)	Flow (cumulative amount of water pumped)	Flow meter	Zone B - off	8/11/18
Task 7	Process Vessel Monitoring	Inspect caustic and acid tanks (including piping) Inspect carbon vessels		All OK no leaks		8/11/18
Task 8	Extraction Well Monitoring	Control room	Pumping rate	Flow meter	EW1- 41.3 EW2- off EW3- ↓ EW4- ↓ EW5- ↓	8/11/18
Task 9	ISVE Piping	Zone B	Water Removal	Portable Pump	N	8/11/18
Task 10	Hazardous Waste Storage	Filterpress Room	Inspect Roll-off for Leaks Drums	Visual Inspection	A1OK	8/11/18
Task 11	Testing of Eye Wash Stations (3 total)	Chemical Storage Area Maintenance Room Near Catox Scrubber	Run water through unit	Press handle	A1OK	8/11/18
Task 12	Check Contents of First Aid Kit	Control Room Maintenance Room	Open & Inspect Container	Visual Inspection	A1OK	8/11/18

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1333  
1300  
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Operator Signature


  
Rob Robertson

TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

#4957P.001/002

Task No.	Pr Desc	Item/Description	Notes	Date Completed
Task 1	Cap Syst Mainten.	Inspect security fencing for forced entry or damage * Inspect Site storm water drainage system (swales and perimeter piping) * Inspect Site cover for erosion * Inspect security fencing for erosion under chain link fabric	All OK	8/18/18
Task 2	ISVE Sys Mainten.	Inspect air compressor for oil level, noise or vibration and drain condensate Inspect pneumatic pumps for general operation Clean air compressor inlet filter and external parts of compressor and drive Manually test air compressor relief valve Inspect all pressure gauges, valves and meters for leaks and proper operation	System off	8/18/18
Task 3	Extractic Mainten.	Inspect well locks, covers and electrical structures for damage/signs of forced entry Check flow meters to ensure proper operation Check 5 offsite chambers for any indications of leakage.	All OK	8/18/18
Task 4	Treatme Monitor	Check air quality in building Conduct general visual inspection of treatment building for unusual conditions (corrosion/leaks/damage) Check supply of sampling equipment Check supply of safety equipment, tools and spare parts Check flow meters to ensure proper operation	drips at filter housings will monitor for repairs All others OK	8/18/18

Notes:

Inspection frequencies revised based on field conditions

\* This activity is seasonal

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E 1  
WEEKLY OPERATION MAINTENANCE MONITORING  
PRISTINE SITE - #3250

Page 2 of 2

#495 P. 002/002

Task No.	Program Description	Location	Measurement	Method	Reading	Date Completed
Task 5	ISVE System Monitoring	Vapor collection piping (at treatment building)	VOC	CEM	N/A	8/18/18
Task 6	Shallow Groundwater Monitoring	Zone A forcemain (at treatment building)	Flow (cumulative an of water pumped)	Flow meter	Zone A - @ System	8/18/18
		Zone B forcemain (at treatment building)	Flow (cumulative an of water pumped)	Flow meter	Zone B - @ off	8/18/18
Task 7	Process Vessel Monitoring	Inspect caustic and acid tanks (including piping) Inspect carbon vessels		All OK	no Leaks	8/18/18 1145
Task 8	Extraction Well Monitoring	Control room	Pumping rate	Flow meter	EW1- 40.6 EW2- off EW3- ↓ EW4- EW5-	8/18/18 1205
Task 9	ISVE Piping	Zone B	Water Removal	Portable Pump	N/A	8/18/18
Task 10	Hazardous Waste Storage	Filterpress Room	Inspect Roll off for Leaks	Visual Inspection	no Leaks	8/18/18 1128
Task 11	Testing of Eye Wash Stations (3 total)	Chemical Storage Area Maintenance Room Near Catox Scrubber	Run water through	Press handle	All OK	8/18/18 1200
Task 12	Check Contents of First Aid Kit	Control Room Maintenance Room	Open & Inspect Con	Visual Inspection	All OK	8/18/18 1203

2018/08/18 13:31

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Operator Signature

*[Signature]*

Robert Robertson

TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

#498; P. 001/002

Task No.	Program Description	Item/Description	Notes	Date Completed
Task 1	Cap System Maintenance	Inspect security fencing for forced entry damage * Inspect Site storm water drainage system (swales and perimeter piping) * Inspect Site cover for erosion * Inspect security fencing for erosion over chain link fabric	All OK	8/25/18 1445
Task 2	ISVE System Maintenance	Inspect air compressor for oil level, noise vibration and drain condensate Inspect pneumatic pumps for general operation Clean air compressor inlet filter and electrical parts of compressor and drive Manually test air compressor relief valve Inspect all pressure gauges, valves and meters for leaks and proper operation	System off	8/25/18
Task 3	Extraction Well Maintenance	Inspect well locks, covers and electrical structures for damage/signs of forced entry Check flow meters to ensure proper operation Check 5 offsite chambers for any indications of leakage.	All OK	8/25/18 1430
Task 4	Treatment System Monitoring	Check air quality in building Conduct general visual inspection of treatment building for unusual conditions (corrosion/leaks/damage) Check supply of sampling equipment Check supply of safety equipment, tools and spare parts Check flow meters to ensure proper operation	Drips at filter housings and FFT #2 pump seal will monitor for repairs All others OK	8/25/18 1503

Notes:

Inspection frequencies may be revised based on field conditions

\* This activity is seasonal dependent

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TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

Page 2 of 2

#498 P. 002/002

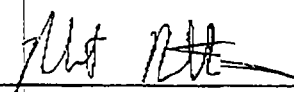
Task	Program Description	Location	Measurement	Method	Reading	Date Completed
Task 5	ISVE System Monitoring	Vapor collection piping (at treatment building)	VOC	CEM	N/A	8/25/18
Task 6	Shallow Groundwater Monitoring	Zone A forcemain (at treatment building)	Flow (cumulative amount of water pumped)	Flow meter	Zone A - @ stem	8/25/18
		Zone B forcemain (at treatment building)	Flow (cumulative amount of water pumped)	Flow meter	Zone B - @ off	8/25/18
Task 7	Process Vessel Monitoring	Inspect caustic and acid tanks (including piping) Inspect carbon vessels		All OK		8/25/18
Task 8	Extraction Well Monitoring	Control room	Pumping rate	Flow meter	EW1- 40.4 EW2- off EW3- EW4- EW5- ↓	8/25/18
Task 9	ISVE Piping	Zone B	Water Removal	Portable Pump	N/A	8/25/18
Task 10	Hazardous Waste Storage	Filterpress Room	Inspect for Leaks Drums	Visual Inspection	NO LKS	8/25/18
Task 11	Testing of Eye Wash Stations (3 total)	Chemical Storage Area Maintenance Room Near Catox Scrubber	Run water through unit	Press handle	All 1	8/25/18
Task 12	Check Contents of First Aid Kit	Control Room Maintenance Room	Open & Inspect Container	Visual Inspection	All 1	8/25/18

1440  
1500  
1427  
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2018/08/25 16:33

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Robert Robson

**Pristine Water Levels Job# 003250**

**Completed By: A. Schwartz/ C. McLaughlin**

**Date Completed: 07/16/18**

<b>Well I.D.</b>	<b>DTW</b>	<b>Well I.D.</b>	<b>DTW</b>	<b>Well I.D.</b>	<b>DTW</b>
EW1	44.40	MW68	42.13	PZ1S	41.10
EW2	25.80	MW69	41.33	PZ1D	41.11
EW3	26.93	MW70	41.65	PZ2	27.00
EW4	27.96	MW71	22.61	PZ3	27.57
EW5	25.00	MW72	22.67	PZ4	28.36
GW45	Dry	MW73	22.31	PZ5	29.39
GW46	16.84	MW74	28.00	PZ6	27.49
GW47	40.60	MW75	28.89	PZ7D	27.71
GW50	18.14	MW76	28.06	PZ7S	27.61
GW51	18.15	MW77	21.41		
GW53	12.29	MW78	21.38		
GW54	Broken	MW79	21.52		
GW55	29.47	MW80	40.29		
GW56	36.79	MW81	43.85		
GW59	13.73	MW82	43.05		
GW60A	13.92	MW83	39.20		
GW62	Dry	MW84	39.83		
GW63	35.38	MW85	40.82		
GW64	Damaged	MW86	27.82		
GW65	36.46	MW87	27.98		
GW66	10.06	MW88	28.01		
GW108	45.10	MW89	27.92		
GW109	43.92	MW90	Abandoned		
GW-P1	12.80	MW91	13.56		
GW-P2	21.82	MW92	18.24		
GW-P3	22.26	MW93	18.30		
GW-P4	20.49	MW94	28.39		
GW-P5	13.21	MW95	28.40		
GW-P6	27.21	MW96	28.30		
GW-P7	Dry	MW97	28.66		
GW-P8	22.58	MW98	21.48		
GW-P9	21.36	MW99	21.59		
		MW100	13.22		
H-218	31.38	MW101	31.06		
H-219	26.29	MW102	23.41		
H-220	31.56	MW103	23.77		
H-221	Semi on Well	MW104	23.68		
H-222	Semi on Well	MW105	23.49		
H-223	Semi on Well	MW106	14.33		
H-224	26.46	MW107	12.96		

TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - :

#501 P, 001/002

Task No.	Program Description	Item/Description	Notes	Date Completed
Task 1	Cap System Maintenance	Inspect security fencing for forced entry or damage * Inspect Site storm water drainage system (swales and perimeter piping) * Inspect Site cover for erosion * Inspect security fencing for erosion under chain link fabric	All OK	9/1/18 1350
Task 2	ISVE System Maintenance	Inspect air compressor for oil level, noise or vibration and drain condensate Inspect pneumatic pumps for general operation Clean air compressor inlet filter and external parts of compressor and drain Manually test air compressor relief valve Inspect all pressure gauges, valves and meters for leaks and proper operation	System off	9/1/18
Task 3	Extraction Well Maintenance	Inspect well locks, covers and electrical structures for damage/signs of faulty Check flow meters to ensure proper operation Check 5 offsite chambers for any indications of leakage.	All OK	9/1/18 1335
Task 4	Treatment System Monitoring	Check air quality in building Conduct general visual inspection of treatment building for unusual conditions (corrosion/leaks/damage) Check supply of sampling equipment Check supply of safety equipment, tools and spare parts Check flow meters to ensure proper operation	Drips at FFT#2 pump & A/S1 manhole door. Will monitor for repairs. All others OK	9/1/18 1407

Notes:

Inspection frequencies may be revised based on field conditions

\* This activity is seasonal dependent

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#501-P.002/002

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~~Robert Robertson~~  
Robert Robertson

TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

Task No.	Program Description	Item/Description	Notes	Date Completed
Task 1	System Maintenance	Inspect security fencing for forced entry or damage * Inspect Site storm water drainage system (swales and perimeter piping) * Inspect Site cover for erosion * Inspect security fencing for erosion under chain link fabric	ALL KEY UNRECOVERABLE	9/8/18 GTL
Task 2	System Maintenance	Inspect air compressor for oil level, noise or vibration and drain condensate Inspect pneumatic pumps for general operation Clean air compressor inlet filter and external parts of compressor and drive Manually test air compressor relief valve Inspect all pressure gauges, valves and meters for leaks and proper operation	NOT CURRENTLY RUNNING	9/8/18 GTL
Task 3	Injection Well Maintenance	Inspect well locks, covers and electrical structures for damage/signs of forced entry Check flow meters to ensure proper operation Check 5 offsite chambers for any indications of leakage.	EW 2, CAGE OK EW 4, CAGE OK	9/8/18 GTL
Task 4	Treatment System Monitoring	Check air quality in building Conduct general visual inspection of treatment building for unusual conditions (corrosion/leaks/damage) Check supply of sampling equipment Check supply of safety equipment, tools and spare parts Check flow meters to ensure proper operation	ALL OK	9/8/18 GTL

Notes:

Inspection frequencies may be revised based on field conditions

\* This activity is seasonal dependent

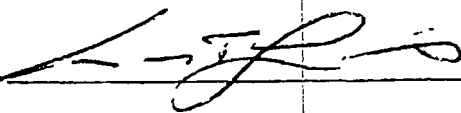
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TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

Task No.	Program Description	Location	Measurement	Method	Reading	Date Completed
Task 5	ISVH System Monitoring	Vapor collection piping (at treatment building)	POC	CEM	N/A	9/8/18 GTL
Task 6	Shallow Groundwater Monitoring	Zone A forcemain (at treatment building)	Flow (cumulative amount of water pumped)	Flow meter "OFF" ALL	Zone A - COMBINED TOTAL 1 @ 229690	9/8/18 GTL
		Zone B forcemain (at treatment building)	Flow (cumulative amount of water pumped)	Flow meter "OFF" ALL	Zone B - TOTAL 2 (BATCH) @ 36.16	
Task 7	Process Vessel Monitoring	Inspect caustic and acid tanks (including piping) Inspect carbon vessels				
Task 8	Extraction Well Monitoring	Control room	Pumping rate @ 38.29 gpm (METER)	Flow meter ALL	EW1- 28465367 @ 1150 HRS EW2- EW3- NOT CURRENTLY EW4- RUNNING EW5-	9/8/18 GTL
Task 9	ISVE Piping	Zone B	Water Removal	Portable Pump	DID NOT PUMP WATER	9/8/18 GTL
Task 10	Hazardous Waste Storage	Filterpress Room	Inspect Roll-off for Leaks DRUMS	Visual Inspection ALL	3 DRUMS IN HAZ-WASTE STORAGE/ACCUMULATION	9/8/18 GTL
Task 11	Testing of Eye Wash Stations (3 total)	Chemical Storage Area Maintenance Room Near Catox Scrubber	Run water through unit	Press handle	ALL OK	9/8/18
Task 12	Check Contents of First Aid Kit	Control Room Maintenance Room	Open & Inspect Container	Visual Inspection	ALL OK	9/8/18

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1215 hrs.

TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

#506TP.001/002

Task No.	Program Description	Item/Description	Notes	Date Completed
Task 1	Capstem Maintenance	Inspect security fencing for forced entry or damage * Inspect Site storm water drainage system (swales and perimeter piping) * Inspect Site cover for erosion * Inspect security fencing for erosion under chain link fabric	All OK	9/15/18
Task 2	ISV System Maintenance	Inspect air compressor for oil level, noise or vibration and drain condensate Inspect pneumatic pumps for general operation Clean air compressor inlet filter and external parts of compressor and drive Manually test air compressor relief valve Inspect all pressure gauges, valves and meters for leaks and proper operation	System off	9/15/18
Task 3	Exition Well Maintenance	Inspect well locks, covers and electrical structures for damage/signs of forced entry Check flow meters to ensure proper operation Check 5 offsite chambers for any indications of leakage.	All K	9/15/18
Task 4	Treatment System Monitoring	Check air quality in building Conduct general visual inspection of treatment building for unusual conditions (corrosion/leaks/damage) Check supply of sampling equipment Check supply of safety equipment, tools and spare parts Check flow meters to ensure proper operation	Drips at FFDump and A/S no. 1 me cover. All other OK	9/15/18

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Notes:

Inspection frequencies may be revised based on field conditions

\* This activity is seasonal dependent

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TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

Page 2

#506 P.002/002

Task No.	Program Description	Location	Measurement	Method	Reading	Date Completed
Task 5	ISVE System Monitoring	Vapor colon piping (at treatment building)	VOC	CEM	N/A	9/15/11
Task 6	Shallow Groundwater Monitoring	Zone A (main (at treatment building))	Flow (cumulative amount of water pumped)	Flow meter	Zone A - System	9/15/11
		Zone B (main (at treatment building))	Flow (cumulative amount of water pumped)	Flow meter	Zone B - off	9/15/11
Task 7	Process Vessel Monitoring	Inspect cae and acid tanks (including piping) Inspect ca vessels		All OK no Leaks		9/15/11 248
Task 8	Extraction Well Monitoring	Control r	Pumping rate	Flow meter	EW1- 41.3 EW2- off EW3- EW4- EW5- ↓	9/15/11 308
Task 9	ISVE Piping	Zone B	Water Removal	Portable Pump	N/A	9/15/11
Task 10	Hazardous Waste Storage	Filterpresom	Inspect Relief for Leaks drums	Visual Inspection	no Leaks	9/15/11 230
Task 11	Testing of Eye Wash Stations (3 total)	Chemical Age Area Maintenance Room Near Catrubber	Run water through unit	Press handle	All OK	9/15/11 300
Task 12	Check Contents of First Aid Kit	Control R Maintenance Room	Open & Inspect Container	Visual Inspection	All OK	9/15/11 305

2018/09/15, 14:44

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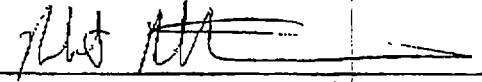
  
Robert Robertson

TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE, INC. SITE - #3250

Task No.	Program Description	Item/Dev	Notes	Date Completed
Task 1	Cap System Maintenance	Inspect fencing for forced entry or damage * Inspect in water drainage system (swales and perimeter piping) * Inspect for erosion * Inspect fencing for erosion under chain link fabric	All OK	9/22/18 121C
Task 2	SVE System Maintenance	Inspect aissor for oil level, noise or vibration and drain condensate Inspect pr pumps for general operation Clean air cor inlet filter and external parts of compressor and drive Manually ompressor relief valve Inspect all gauges, valves and meters for leaks and proper operation	System off	9/22/18
Task 3	Extraction Well Maintenance	Inspect wecovers and electrical structures for damage/signs of forced entry Check flow to ensure proper operation Check 5 of nbers for any indications of leakage.	All OK	9/22/18 1150
Task 4	Treatment System Monitoring	Check air o building Conduct gual inspection of treatment building for unusual conditions (corrosion, amage) Check sampling equipment Check supplety equipment, tools and spare parts Check flow to ensure proper operation	Drip at A/S no. 1 manhole. All others OK	9/22/18 122C

## Notes:

Inspection frequencies may be revised based on fittions

\* This activity is seasonal dependent

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**TABLE 2**  
**QUARTERLY OPERATION AND MAINTENANCE MONITORING**  
**PRISTINE, INC. SITE - #3250**

#516-P-001/002

Task No.	Program Description	Item/Description	Notes	Date Completed
Task 1	Cap System Maintenance	Inspect monitoring/piezometers/soil gas probes Ensure all soil gas probes visible	All OK	9/20/18 1045
Task 2	ISVE System Maintenance	Change compressor air filters quarterly Change dual inline filter for air dryers in May & December Change oil in compress every 6 months starting at summer shutdown Use only synthetic oil supplied by champion	System off	9/25/18
Task 3	Extraction Well Maintenance	Check pumps for unusual knocks or vibrations Inspect electrical control supply/ampereage draw Inspect chambers for water accumulation / line-valve leakage Cycle extraction wells I2 & EW4 on for 1 hour	Completed	9/19/18 1630
Task 4	Treatment System Monitoring	Check HVAC exhaust is for proper operation Inspect fire extinguisher and smoke alarms Inspect lighting, electrical systems and power cords Inspect sump pit grate Verify general operation of main building sump pumps Remove and clean in-line strainers	All OK	9/24/18 1440
Task 5	Material Storage	Visually inspect used tank to check for spillage and determine whether tank needs to be emptied Vendor has been called to empty	All OK	8/23/18 1330
Task 6	Equipment Inspection	Inspect spill containment material at north mandoor area Inspect broom and shovels at roll off area Confirm presence of alarm at main mandoor and north mandoor	All OK	9/25/18 1030

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**TABLE 2**  
**QUARTERLY OPERATION AND MAINTENANCE MONITORING**  
**PRISTINE, INC. SITE - #3250**

Task No.	Program Description	QS#	Locat	Measurement	Method	Trench Branch	Nes	Date Completed
Task 7	ISVE System Monitoring		Gas Pies (SG-66 locations)	Vacuum	Portable Vacuum Gauge		(attached sheet)	
		N/A	Gas Pies	Soil Temperatures	Temperature Probe			
			Air intion wells (AIW 1-7)	Pressure	In-line pressure gauge			
			Vaporsllection piping (6)	Vacuum ("H <sub>2</sub> O)	In-line vacuum gauge	VS-1 south: north:	VS-2 VS-3	
		N/A	Vaporsllection piping (at vacuheaders and wells) (6)	Flow rate (FPM)	In-line velocity meter	south: north:		
			Vaporsllection piping (at vacuheaders and wells) (6)	VOC	Portable Instrument (PID)	south: north:		
Task 8	Equipment Inspection	N/A	Ladder inspection	Inspect for wear	Visual		711 OK	9/23/18 1100
			Extern Cords Inspection	Inspect for wear	Visual			
Task 9	Fire Protection	N/A	Porta Fire Extinguisher	Check Pressure Monthly	Visual		complete	9/24/18 1430
Task 10	Fire Protection	N/A	Sprink System	Take Pressure Reading Monthly	In-Line Pressure Gauge		111 OK	9/12/18 1520
				Open Drain Quarterly	Valve			
Task 11	Alarm System	N/A	ADTntrol Panel	Test System	Trigger all alarms		111 OK	9/12/18 1600

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*[Signature]*  
 Robert Robertson

TABLE 1  
WEEKLY OPEIN AND MAINTENANCE MONITORING  
STINE, INC. SITE - #3250

#519 P.001/002

Task No.	Program Description	Item/Description	Notes	Date Completed
Task 1	Cap System Maintenance	Inspect security fencing for forced entrage * Inspect Site storm water drainage sysles and perimeter piping) * Inspect Site cover for erosion * Inspect security fencing for erosion uin link fabric	OK	9/29/18
Task 2	ISVE System Maintenance	Inspect air compressor for oil level, noiration and drain condensate Inspect pneumatic pumps for general o Clean air compressor inlet filter and extris of compressor and drive Manually test air compressor relief valv Inspect all pressure gauges, valves and or leaks and proper operation	System off	9/29/18
Task 3	Extraction Well Maintenance	Inspect well locks, covers and electricals for damage/signs of forced entry Check flow meters to ensure proper op Check 5 offsite chambers for any indicaeakage.	OK	9/29/18
Task 4	Treatment System Monitoring	Check air quality in building Conduct general visual inspection of trouilding for unusual conditions (corrosion/leaks/damage) Check supply of sampling equipment Check supply of safety equipment, toolare parts Check flow meters to ensure proper op	OK	9/29/18

Notes:

Inspection frequencies may be revised based on field conditions

\* This activity is seasonal dependent

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TABLE 1  
WEEKLY OPERATION AND MAINTENANCE MONITORING  
PRISTINE INC. SITE - #3250

Page 2 of 2

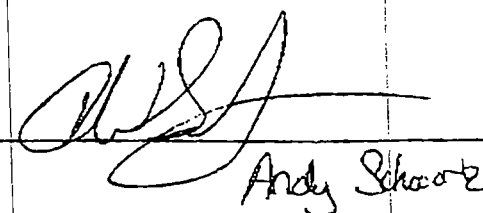
#519-P-002/002

Task No.	Program Description	Location	Measurement	Method	Reading	Date Completed
Task 5	ISVE System Monitoring	Vapor collection piping (at treatment building)	VOC	CEM	N/A	9/29/18
Task 6	Shallow Groundwater Monitoring	Zone A forcemain (at treatment building)	Flow (cumulative amt of water pumped)	Flow meter	Zone A - System @ off	9/29/18
		Zone B forcemain (at treatment building)	Flow (cumulative amt of water pumped)	Flow meter	Zone B - System @ off	9/29/18
Task 7	Process Vessel Monitoring	Inspect caustic and acid tanks (including piping) Inspect carbon vessels			No Leaks	9/29/18
Task 8	Extraction Well Monitoring	Control room	Pumping rate	Flow meter	EW1- 39.6 EW2- EW3- EW4- EW5- ] off	9/29/18
Task 9	ISVE Piping	Zone B	Water Removal	Portable Pump	N/A	9/29/18
Task 10	Hazardous Waste Storage	Filterpress Room	Inspect <del>Bottom</del> for Leaks Drums	Visual Inspection	OK - no leaks	9/29/18
Task 11	Testing of Eye Wash Stations (3 total)	Chemical Storage Area Maintenance Room Near Catox Scrubber	Run water through:	Press handle	OK	9/29/18
Task 12	Check Contents of First Aid Kit	Control Room Maintenance Room	Open & Inspect Coner	Visual Inspection	OK - Stomach acid expired	9/29/18

2018/10/01 09:56

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Field File

Operator Signature

  
Andy Schwartz

# **Attachment 4**

## **Summary of Groundwater & ISVE Treatment System Downtime**

**SUMMARY OF GROUNDWATER AND ISVE DOWNTIME  
FOR THE MONTH OF JULY 2018  
PRISTINE, INC. SITE  
READING, OHIO**

July 20, 2018	Severe storm in the late afternoon. Extremely loud thunderclap happened and everything associated with the system went down. The treatment building appears to have been hit by lightning. Computer screen went dark, pumps turned off and the system went down. Determined that the PLC had faulted out. Reset the PLC. Rebooted the system computer. The computer seems very slow. The computer is going through various checks. After waiting for several hours, the computer is only at 17% completion on system checks.
July 21, 2018	System Down due to lightning incident
July 22, 2018	System Down due to lightning incident
July 23, 2018	System Down due to lightning incident
July 24, 2018	System Down due to lightning incident. Was able to get system back online. System will not stay running due to pH analyzers. Discovered one analyzer was still not operational after replacing internal fuse. Replaced fuse in A/S no 2 analyzer but the analyzer is bad. Restarted system to troubleshoot. Worked with J Worrall over the phone to test PLC functions. Started testing various components of the pumping system. Along with the A/S no 2 analyzer, Filter Feed Tank no 2 flow transmitter, Filter Feed Tank no 2 level control valve, Pretreat Tank no 2 acid addition pump, and the no 2 clarifier rake drive have all been damaged due to the lightning strike.
July 25, 2018	Removed bad Filter Feed Tank no 2 flow transmitter and replaced with spare. Removed bad Filter Feed Tank no 2 level control valve. Pulled no 2 E/A tank flow control valve and installed in the place of the bad level control valve. Power overloads were tripped for the air stripper blower. Reset overloads. Started system back up. Calibrated pH analyzers/probes. GHD personnel onsite for groundwater sampling round. Changed out cartridge filters.
July 26, 2018	Received call in the early morning stating system was down. Came in and restarted system. System down due to pH issue. Increased acid addition at A/S no 1 to compensate for no acid flow at Pretreat Tank no 2.

**SUMMARY OF GROUNDWATER AND ISVE DOWNTIME  
FOR THE MONTH OF AUGUST 2018  
PRISTINE, INC. SITE  
READING, OHIO**

<b>August 01, 2018</b>	Received call in the early a.m. stating the system was down. Restarted system from home. Drove to site and replaced cartridge filters.
<b>August 02, 2018</b>	Bray valve that was used in place of the one damaged by the lightning strike is starting to malfunction. Causing the E/A pump to turn off periodically to compensate (downtime).
<b>August 03-05, 2018</b>	System down due to lightning strike damage.
<b>August 06, 2018</b>	Filter feed tank (FFT) no.2 level control valve still malfunctioning (downtime). Increased valve parameters in the programming to limit how far the valve can close to test whether this would eliminate valve "sticking".
<b>August 10, 2018</b>	Found level transmitter for E/A tank throwing false level readings intermittently causing downtime. Pulled transmitter and cleaned ultrasonic signal reading surface and reinstalled.
<b>August 11, 2018</b>	Received call in the early a.m. stating system was down. Found cartridge filters plugged (downtime) with blackish gray colored mud like material. Opened up filter housings and flushed clean of mud like material. Installed new filters and restarted system.
<b>August 28, 2018</b>	Prepped new filter housings for installation. Initiated system shutdown procedures for filter housing install (downtime). Removed old cartridge filter housings. Installed new cartridge filter housings. Installed new filters into housings. Sprayed out inside/cleaned old filter housings.
<b>August 29, 2018</b>	Automatic valve at FFT no 2 started malfunctioning in the early a.m. (downtime). Manually cycled valve several times to free up valve.

**SUMMARY OF GROUNDWATER AND ISVE DOWNTIME  
FOR THE MONTH OF SEPTEMBER 2018  
PRISTINE, INC. SITE  
READING, OHIO**

<b>September 11, 2018</b>	Shut system down to pull filter feed tank no.2 level control valve and install new one. Downtime caused by EW1 tripping.
<b>September 12, 2018</b>	Site went down a little after 11:00 o'clock last night. No alarms showing reason for system going down. Discovered that EW1 has tripped out at power disconnect. Reset power and took current readings. Readings are well within specs.
<b>September 13, 2018</b>	EW1 tripped out again at approximately 11.30 pm.(downtime)
<b>September 14, 2018</b>	Reset EW1 which had tripped out last night. Reset EW1 power disconnect. Calibrated pH analyzers/probes. Changed out cartridge filters. Shoveled condensed sludge in drum with cartridge filters. EW1 tripped out again at approximately 1600 hrs. Trends show EW1 only trips out when the motor starts. Disassembled starter relay and inspected contacts.
<b>September 15, 2018</b>	Discovered system had gone down due to pH out of range at the air stripper (downtime). This was caused by the filter feed tank pump turning off to compensate for the level control valve not working. Restarted system and set flow from filter feed tank manually at pump so that the E/A tank transfer pump will turn off to compensate for the level control valve not working. This will insure that the filter feed tank pump will not turn off causing pH out of range
<b>September 16, 2018</b>	EW1 tripped out again at 0430 (downtime).
<b>September 17, 2018</b>	EW1 tripped out (downtime) Reset power disconnect. Started system back up.
<b>September 18, 2018</b>	Adjusted acid addition to compensate for system flows being in manual (downtime).
<b>September 19, 2018</b>	Initiated system shutdown procedures to allow EW1 pump to be pulled. Layne pulled the EW1 pump and motor. When installing the new pump, motor, and cable the motor would direct short when submerged in water. Tried several times to get power lead to seal at motor connection without success. Attempted to install second motor and lead we had onsite without success also. Contacted vendor and they stated we would have to send them the motor and lead so they could seat the lead correctly. Installed new pump with old motor and lead. Started system back up.
<b>September 24-30, 2018</b>	Data corrupted when computer lost communication.